

ATTACHMENT A

REMARKS

Claims 1-14 have been rejected under 35 USC 112, first paragraph, as “failing to comply with the enablement requirement.” This rejection is respectfully traversed.

The Examiner contends that the “claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.” More specifically, it is stated in the Office Action that “[a]pplicant recites in the claims the presence of a lithium admixture component however it is unclear as to just what the lithium admixture is supposed to be.” It is further contended that “[n]owhere does applicant adequately describe what is contained in the lithium admixture” and it is concluded that “since the specification does not describe the make-up of the lithium admixture component the claims which recite this component are not enabled by the specification and therefore fail to comply with the first paragraph of 35 USC 112.”

It is respectfully submitted that an “admixture” is a term of art in this field and that a lithium admixture is simply an admixture which contains lithium. In general, any admixture containing lithium which would serve the purposes of the invention, i.e., reducing alkali-aggregate reaction, can be used. Examples include lithium hydroxide, lithium chloride, lithium carbonate, lithium fluoride, lithium sulfide, lithium sulfate, and lithium nitrate. As stated in the specification, such lithium admixtures are commercially available. Moreover, as stated in the specification, the purpose of the lithium admixture is in reducing or eliminating alkali-aggregate reaction. In the latter regard, the lithium in the admixture prevents deterioration of concrete resulting from the alkalis in the Portland cement reacting with certain types of silicates in the aggregate. In the absence of lithium, this reaction can form an expanding gel which destroys the concrete from within. Heightened environmental requirements on cement manufacturing plants have resulted in an increased alkali content in cement. Previously, these alkalis were expelled into the air but this is no longer permitted in some instances. In addition, as the better aggregate supplies are used up, the quality decreases, thereby forcing the use of aggregates known to contain more reactive silicates. It is respectfully submitted that given the stated function of the lithium admixture, i.e., to reduce or eliminate alkali-aggregate reaction, and the commercial availability of such an admixture, one of ordinary skill in the art would understand what is meant

by a “lithium admixture” and would certainly be able to make and use the invention based on the specification.

Claims 1-14 have been rejected under 35 USC 112, second paragraph, as being “indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” The claims have been amended to overcome some of the objections raised while other rejections are respectfully traversed.

Considering the specific objections raised, as stated in the claims, Blaine fineness is defined in ASTM (American Society for Testing and Materials) C-204, (which is entitled “Standard Test Method for Fineness of Hydraulic Cement by Air Permeability Apparatus”). This test method describes determination of the fineness of hydraulic cement using the Blaine air permeability apparatus. However, the Examiner has made a good point, i.e., the units were indeed omitted. The fineness is characterized in the standard definition as a specific surface area expressed in square meters per kilogram. These units have been added to claim 1 and the Examiner is thanked for pointing out this deficiency.

With respect to the phrase “tricalcium aluminate of about 6%,” the Examiner also has a point here. The claim has been amended to refer to “a tricalcium aluminate content of about 6%” as suggested by the Examiner.

With respect to the “makeup of the lithium admixture,” this point is discussed above.

Regarding the range of “0.01-5%,” the claim has been amended to make it clear that the amount is that of both the lithium admixture and the at least one further additive.

Regarding the phrase “further additive,” subject matter taken from claims 2 and 3 has been added to claim 1 so as to give this phrase more meaning.

Turning to the objection to claim 3, the phrase “high range” is a term of art in this instance and is specifically taken from ASTM C-494, Standard Specification for Chemical Admixtures, which describes the physical properties of seven types of chemical admixtures, viz., types A, B, C, D, E, F and G. Type F is described as a “water reducing, high range admixture” while type G is described as a “water reducing, high range, and retarding admixture.” The definitions set forth in the claims correspond to those of the ASTM C-494 Standard and thus are believed to be appropriate in this instance.

With regard to claim 13, it is respectfully submitted that the phrase “fine aggregate” is also a term of art. This comes from ASTM C-33 and, in this regard, Section 5 thereof provides a

general description of fine aggregate as consisting of natural sand, manufactured sand or a combination thereof. Thus, it is respectfully submitted that "fine aggregate" as used herein is based on an accepted standard and should be acceptable in the claims.

The other matters raised with respect to claim 13 and claim 14 have been discussed above.

For the reasons set forth hereinbefore, it is respectfully submitted that the claims, as amended, are fully in accordance with the requirements of 35 USC 112, first paragraph, and 35 USC 112, second paragraph, and thus allowance of the application in its present form is respectfully solicited.

END REMARKS